AMENDMENTS TO THE CLAIMS

Claims 1 through 10 (cancelled).

11.(currently amended) Apparatus for transmitting a signal through an optical data transmission network, the apparatus comprising a pulse emitter and at least one line fiber for conveying at least one pulse in said line fiber, wherein the apparatus comprises a spreader module for linearly spreading pulses, said spreader module comprising a propagation medium that is dispersive and linear, said propagation medium presenting accumulated chromatic dispersion that is high enough to lower the peak power of the pulse to below a predetermined threshold, where a signal above said threshold is subjected to non-linear distortion in the line fiber, said spreader module being disposed between the emitter and the line fiber, wherein the spreader module comprises a fiber of the high order mode type or a fiber of the super large area type.

12.(cancelled).

13.(previously presented) The transmission apparatus according to claim 11, wherein it includes a plurality of amplifier modules disposed regularly along the line fiber, each including a dispersion compensation module comprising a propagation medium that is dispersive and linear.

18.(previously presented) The method according to claim 16, wherein said optical transmission is at a data rate of not less than 160 Gbit/s.

19.(previously presented) A module comprising a propagation medium that is dispersive and linear, said module being disposed between a pulse emitter and a line fiber, in order to transmit pulses into the line and to spread pulses linearly, with the accumulated chromatic dispersion of said module being high enough to lower the peak power of pulses to below a predetermined threshold, above which the signal is subjected to distortion, wherein the module comprises a fiber of the high order mode type or a fiber of the super large area type.

20.(currently amended) An amplifier module in a line fiber for transmitting pulses into the line, said amplifier module comprising pulse amplifier means and a compensation module comprising a propagation medium that is dispersive and linear in order to increase the peak power and reduce the width of the pulses, wherein the compensation module comprises a fiber of the high order mode type or a fiber of the super large area type.

14.(previously presented) The transmission apparatus according to claim 13, wherein the dispersion compensation module comprises a fiber of the high order mode type, the super large area type, or having photonic crystals.

15.(previously presented) The transmission apparatus according to claim 11 for use as an optical network having a data rate of not less than 160 Gbit/s.

16. (currently amended) A method of transmitting a signal through an optical data transmission network, the method comprising the steps of emitting at least one pulse and of conveying said pulse via an optical data transmission network comprising at least one line fiber, wherein the method further comprises, prior to conveying the pulse to the line fiber, a step consisting in causing the pulse to be conveyed by a propagation medium that is dispersive and linear in a spreader module comprising a fiber of the high order mode type or a fiber of the super large area type, said propagation medium presenting accumulated chromatic dispersion that is high enough to lower the peak power of the pulse to below a predetermined threshold, where a signal above said threshold is subjected to non-linear distortion in the line fiber.

17.(previously presented) The transmission method according to claim 16, wherein for a transmitted pulse that is amplified by amplifier modules disposed regularly along the line fiber, the pulse is conveyed within the amplifier modules in a propagation medium that is dispersive and linear in order to compensate the dispersion to which the pulse has been subjected in the line fiber.